

# Reproductive System

Grades 7 and 8, Lessons #6 and 7

## Time Needed

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Two periods

## Student Learning Objectives

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To be able to...

1. Pronounce, spell, and describe the function (with 75% accuracy) of the 45 terms in the glossary on Reproductive System Reference Sheet 3.
2. Explain that variation in size and shape of sexual parts is normal.

## Agenda

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1. Explain the relevance of the lesson to the unit and to students' lives.
2. Use Reproductive System Reference Sheets 1-3 and the blackboard, a document camera, or KidsHealth.org to introduce the anatomy.
3. Answer students' verbal and anonymous questions.
4. Play the Reproductive System game.
5. Assign homework.

This lesson was most recently edited on July 22, 2013.  
Alternate formats available upon request.

## **Materials Needed**

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### **Classroom Materials, equipment:**

- *Reproductive System Reference Sheets 1 and 2* for a document camera\*
- *32 Reproductive System Game Cards* (one class set ... that is: one single-sided copy of each of eight pages, cut into four parts, so there's one question on each "card.")
- Overhead projector
- Shoe box or coffee can
- 500 paperclips

### **Student Materials (for each student):**

- *Reproductive System Reference Sheets 1-3*
- *Family Homework Exercise: The Reproductive System*
- *Family Homework Letter* (Appendix B)
- *Reproductive System Worksheet* (2 copies per student)

\* Unless you prefer to draw freehand, introducing one part at a time

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## Activities, Day One

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1. **Explain the relevance of the lesson to students' lives and to what you have studied so far:**

**Home & Family Life** - Just as we have studied how to take care of a home and a family in this course, we also want to work on "how to take care of yourself." The first step is to understand how your own body and other peoples' bodies work.

**Health** - Before you can learn about how to keep a body system healthy, you have to understand how it is supposed to work, when it *is* healthy. We have studied other systems; today we will look at the reproductive system.

**Science** - We have studied how individual cells reproduce, and we have looked at simple life forms. It is time to look at reproduction in mammals, and humans in particular.

2. **Hand out to each student a copy of Reproductive System Reference Sheets 1-3 and discuss them either at the board, using a document camera, or via the web.**

Then introduce the reproductive system in one of three ways. You can use a document camera to show Reproductive System Reference Sheets 1 and 2. Or, preferably, draw the systems on the blackboard, so that you can introduce one part at a time. Pronounce the name, and explain the function of each part. Describe the path of a sperm cell, using the terms "erection" and "ejaculation." Describe the menstrual cycle, beginning with "ovulation." If you do not consider yourself knowledgeable enough to do such a lecture/demonstration, online resources can help. One good website is [www.kidshealth.org](http://www.kidshealth.org) which has interactive webpages on male and female reproductive systems at [http://kidshealth.org/teen/interactive/mrs\\_it.html#cat20129](http://kidshealth.org/teen/interactive/mrs_it.html#cat20129) and [http://kidshealth.org/teen/interactive/female\\_it.html#cat20129](http://kidshealth.org/teen/interactive/female_it.html#cat20129), respectively

3. **Answer students' questions, both verbal and anonymous.**

Depending on how long this takes, you may or may not finish the lesson today.

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## Activities, Day Two

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4. **Play the Reproductive System Game.**

- a. Begin by refreshing everyone's memory about ground rules and emphasizing mutual consideration.
- b. Drop the *Reproductive System Game Cards* into a shoe box or coffee can.
- c. Have students pair up and provide each pair with plenty of scrap paper.
- d. One student draws a game card and hands it to you.

- e. You read the question aloud and give each team a half a minute to consult with one another, and/or look at their reference sheets, and jot their answer on a slip of scrap paper. Thus, all teams play at once holding their answers up, as soon as they can.
- f. Either you or the student who drew the question reads the answer and explanation aloud.
- g. Every team with a correct answer gets a paper clip.
- h. A second student draws a game card ... repeat steps d-g, until all 32 game cards have been used.
- i. Any team with at least 16 paper clips gets a prize (perhaps an extra "A," extra participation points, penny candy).

We recommend that students read the answer and explanation aloud, in groups who can do it with a minimum of giggling and a reasonably mature, matter-of-fact attitude. It gives them the opportunity to practice pronunciations and especially to rehearse a new behavior: communicating about sexuality in a responsible, dignified way. However, a participatory exercise can be counter-productive (can decrease comfort and respect) if the class is too rambunctious and/or has had less experience with active learning. Use your own judgment.

This game is a learning tool, not just a review. So some items in the game are new information. The teams should be encouraged to guess. Playing matters more than winning.

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## Homework

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Students' options ...

- **Family Homework Exercise: The Reproductive System**  
Students will need to take home two copies of **The Reproductive System Worksheet** to complete this Family Homework. And, as always, students will also need to take home the **Family Homework Letter** (Appendix B).
- Complete and turn in **The Reproductive System Worksheet**, independently.

NOTE: If you assign a **Family Homework Exercise**, it is essential to offer at least one alternative assignment. There will be some students who do not have a family member with whom they feel they can discuss these issues. Also, allow at least a week for **Family Homework Exercises**, as many families are very busy.

<p>Q: True or False? The menstrual period lasts about a day each month.</p> <p>A: False</p> <p>Explanation: It usually takes between two and 10 days for the uterus to completely empty. There are about four to six tablespoons of blood and tissue in all.</p>	<p>Q: True or False? Each time a man or boy ejaculates, about 360 million sperm cells come out.</p> <p>A: True</p> <p>Explanation: He may release a half to a whole teaspoonful of semen. It usually contains at least 200 million sperm cells. 360 million is average.</p>
<b>REPRODUCTIVE SYSTEM GAME CARDS</b>	
<p>Q: How long after its release can an egg be fertilized? About a day, about a week, or about month?</p> <p>A: About a day.</p> <p>Explanation: If it doesn't meet with a sperm within a day, or two at most, the ovum just dissolves.</p>	<p>Q: True or False? Another word for tube is "duct."</p> <p>A: True</p> <p>Explanation: That is why many books call the fallopian tubes "oviducts" and the vas deferens tubes "sperm ducts." Duct is spelled D-U-C-T, not D-U-C-K like the bird.</p>

Q: The end of the uterus that opens into the vagina is the \_\_\_\_\_

A: Cervix

Explanation: The cervix is not a separate part; it's just the neck of the uterus. The doctor wipes some cells from the cervix when a woman has a Pap Test for cancer. These cells are examined under a microscope.

Q: The sac that holds the testes is called the \_\_\_\_\_

A: Scrotum

Explanation: The scrotum holds them and controls their temperature. Sperm can only grow at temperatures a little cooler than normal body temperature of 98.6 degrees ... so the testes have to be outside the body, in the scrotum, in order to be cool enough to make sperm.

### REPRODUCTIVE SYSTEM GAME CARDS

Q: True or False? Once a girl starts having menstrual periods, she will get one every 28 days.

A: False

Explanation: 28 days is only an average. Adult women may have periods every 20 to 36 days. In some adults and most young girls, the cycle is a different length each time ... 3 weeks one time, 5 weeks another, maybe even skipping some months altogether. Then, around age 45 to 55, a woman stops having menstrual periods.

Q: True or False? Having intercourse a lot will make the penis larger?

A: False

Explanation: The penis is not made of muscle, so exercise has no effect on its size. Like the ears and the feet, the penis is a different size in each person. But no matter how big it is, it works just as well. And most penises are about the same size when they are erect.

<p>Q: True or False? When a boy is circumcised, the doctor removes the glans of the penis.</p> <p>A: False</p> <p>Explanation: Neither the glans, nor the shaft is removed. It's the foreskin that is removed in a circumcision operation. The foreskin is a sleeve of skin that partly covers the glans.</p>	<p>Q: When a woman or girl releases an egg, it's called _____</p> <p>A: Ovulating or Ovulation</p> <p>Explanation: The Latin name for egg is "ovum." So when an ovum pops out of an ovary, it's called ovulation. That happens about once a month, a couple of weeks before a girl's period.</p>
<b>REPRODUCTIVE SYSTEM GAME CARDS</b>	
<p>Q: True or False? A woman usually ovulates during her menstrual period.</p> <p>A: False</p> <p>Explanation: She usually ovulates two weeks before her next period. She ovulates and then, if she does not get pregnant, the extra lining in the uterus is not needed. So after two weeks, it comes out. That's called menstruating or "having a period."</p>	<p>Q: Name one of the parts of the body that makes some of the liquid in semen.</p> <p>A: Seminal vesicles, prostate gland, Cowper's (or bulbourethral) glands.</p> <p>Explanation: Any of these answers is OK. Actually, the seminal vesicles and prostate contribute directly to the semen. The Cowper's (or bulbourethral) glands make a discharge that lines the urethra and makes it less acid-like. All three parts are important in keeping sperm healthy.</p>

Q: True or False? After puberty, the vagina is wet most of the time.

A: True

Explanation: Just like the mouth and eyes, the vagina is normally wet. That's how it cleans itself. This normal discharge is white or clear; it does not itch and it varies in amount. It's a sign of good health.

Q: The liquid that carries sperm is called \_\_\_\_\_

A: Semen

Explanation: Semen is the thick, white discharge that nourishes sperm and helps it travel further and live longer. A teaspoonful or less of semen comes out each time a man or boy ejaculates.

### REPRODUCTIVE SYSTEM GAME CARDS

Q: When sperm comes out, it's called \_\_\_\_\_.

A: Ejaculation or Nocturnal Emission

Explanation: Either answer is correct. Ejaculation means the release of sperm. If a man or boy ejaculates in his sleep, it's called a nocturnal emission or "wet dream."

Q: When the penis or clitoris fills with blood and becomes larger, it's called an \_\_\_\_\_.

A: Erection

Explanation: Erections happen more frequently after puberty. People get them often, even without feeling sexual feelings. It is nothing to worry about, it is the body's way of practicing. A boy knows when he has an erection. A girl may not notice when she has one, because the clitoris is very small.



<p>Q: The word that describes both testicles and ovaries is _____.</p> <p>A: Gonads</p> <p>Explanation: A male's testes and a female's ovaries are a lot alike. Both kinds of gonads make sex cells (sperm and eggs) and both kinds of gonads make sex hormones.</p>	<p>Q: True or False: All human beings have genitals, whether they are male or female.</p> <p>A: True</p> <p>Explanation: "Genitals" are simply the outside parts of anyone's reproductive system. Males' genitals are the penis and scrotum. Females' genitals (sometimes called the vulva) are the labia, the hymen, and the clitoris.</p>
<b>REPRODUCTIVE SYSTEM GAME CARDS</b>	
<p>Q: The finger-like parts on the end of each fallopian tube are called _____.</p> <p>A: Fimbria</p> <p>Explanation: Remember, the tubes are not actually attached to the ovaries. When a girl or woman ovulates, the fimbria wave around, find the egg cell and draw it into the tube.</p>	<p>Q: True or False? Doctors usually recommend circumcision.</p> <p>A: False</p> <p>Explanation: Today, it is generally left up to the parents whether to have a baby boy circumcised. Doctors disagree about whether it is a good idea. Parents may choose to do it because of religious beliefs or so the son will look like the father or to try to reduce future infections. Many parents today choose not to have their sons circumcised, unless there is a problem.</p>

Q: The tube that carries urine and (in males) semen out of the body is the \_\_\_\_\_.

A: Urethra

Explanation: The male's urethra is the tube that runs through the penis. The female's is the opening in front of the anus and vagina. It is connected to the bladder. In a male it is also connected to the vas deferens.

Q: True or False? The human sperm cell is about as big as an apple seed?

A: False

Explanation: It is actually microscopic ... so small you cannot see it without looking under a microscope. In fact, every sperm cell that made every person alive in the world today could fit in a thimble.

### REPRODUCTIVE SYSTEM GAME CARDS

Q: True or False? An ovum is the size of a grain of sand.

A: True

Explanation: It is big enough to see without a microscope, but small enough that a 2-liter bottle could contain all the egg cells that made all the people alive in the world today.

Q: True or False? The sperm cells take about a week to develop, before they come out.

A: False

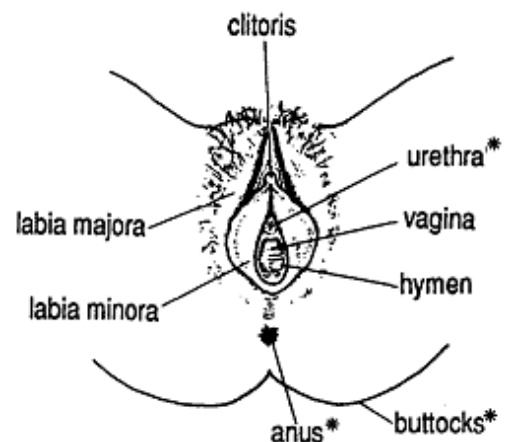
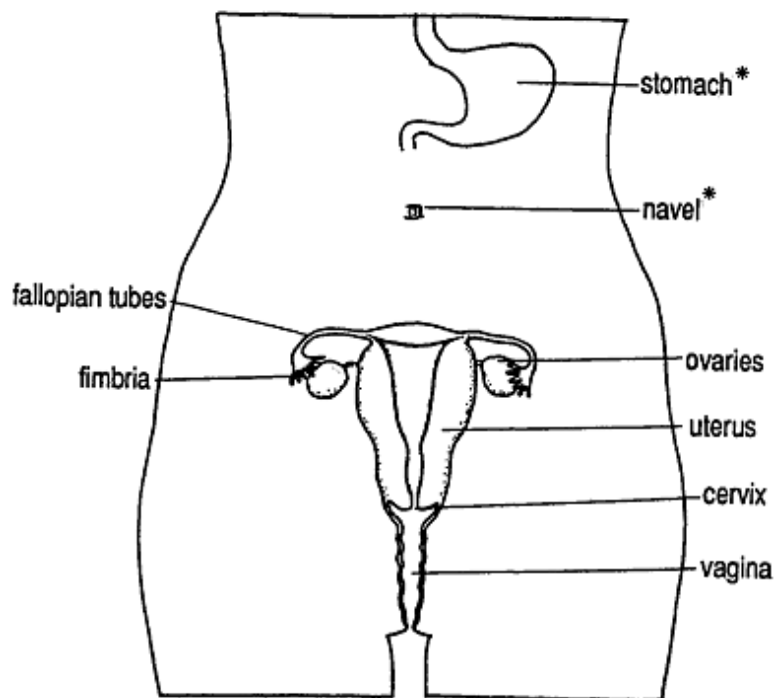
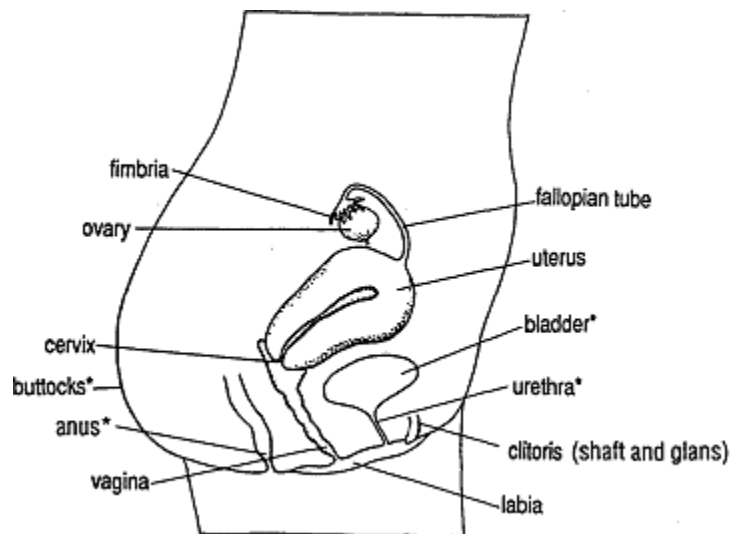
Explanation: They grow in the epididymis for two or three *months* before they can start a pregnancy. That means it is possible for a man to damage his sperm by using certain drugs -- maybe even including alcohol -- before the beginning of the pregnancy. He could possibly harm his future child, while the sperm are maturing.

<p>Q: Is a pregnancy most likely to start <i>during</i> a woman's period, just <i>before</i> a period, or in <i>between</i> her periods?</p> <p>A: In between her periods.</p> <p>Explanation: Of course, a pregnancy could start anytime. Many women, and most young girls, do not release eggs on schedule. But the most likely time for fertilization to be possible is about two weeks before a menstrual period.</p>	<p>Q: True or False? A woman with big breasts will be more likely to be able to nurse a baby.</p> <p>A: False</p> <p>Explanation: Breast size does not make any difference in nursing. Besides, it does not make a woman more womanly, any more than penis size makes a man manly. Some people worry about breast or penis size, •but size is not what makes a person attractive, lovable, or able to become a parent... and breast size has nothing to do with the amount of milk produced.</p>
<b>REPRODUCTIVE SYSTEM GAME CARDS</b>	
<p>Q: True or False? A baby develops in a woman's or girl's stomach.</p> <p>A: False</p> <p>Explanation: A baby develops in the <i>uterus</i>. The stomach is part of the digestive system, not the reproductive system. Some people call a person's abdomen (their whole mid-section) their "stomach" but your stomach is actually a specific organ!</p>	<p>Q: The folds of skin that protect the opening to the vagina and urethra are called _____.</p> <p>A: Labia, Labia Majora, or Labia Minora</p> <p>Explanation: Any of these answers is OK. The outer folds are the labia majora and the inner, smaller folds are the labia minora.</p>

<p>Q: The extra membrane around the opening of some girls' vaginas is called the _____.</p> <p>A: Hymen</p> <p>Explanation: Some girls are born without this extra skin, or with very little of it. Others may gradually stretch it through sports, masturbation, or tampon use. Some will stretch it or tear it slightly the first time they have vaginal intercourse. Normally, it has an opening to let blood and discharge out.</p>	<p>Q: True or False? Girls are born with all the eggs they will ever have.</p> <p>A: True</p> <p>Explanation: A baby girl is born with hundreds of thousands of eggs already in her ovaries. Some of them will mature one day, and may get fertilized and become her babies. That is a good reason for a girl to stay healthy and avoid drugs, to protect those egg cells in case she ever wants children.</p>
<b>REPRODUCTIVE SYSTEM GAME CARDS</b>	
<p>Q: True or False? Men run out of sperm around age 50 or if they have too much sex.</p> <p>A: False</p> <p>Explanation: Most men keep making sperm their whole lives. However, women stop releasing eggs around age 50.</p>	<p>Q: These are natural chemicals made by many glands which flow through the bloodstream. They are messengers which help the body work properly.</p> <p>A: Hormones</p> <p>Explanation: Everyone makes the same sex hormones but males make more testosterone and females make more estrogen</p>

# Reproductive System Reference Sheet and Transparency 1

## The Female

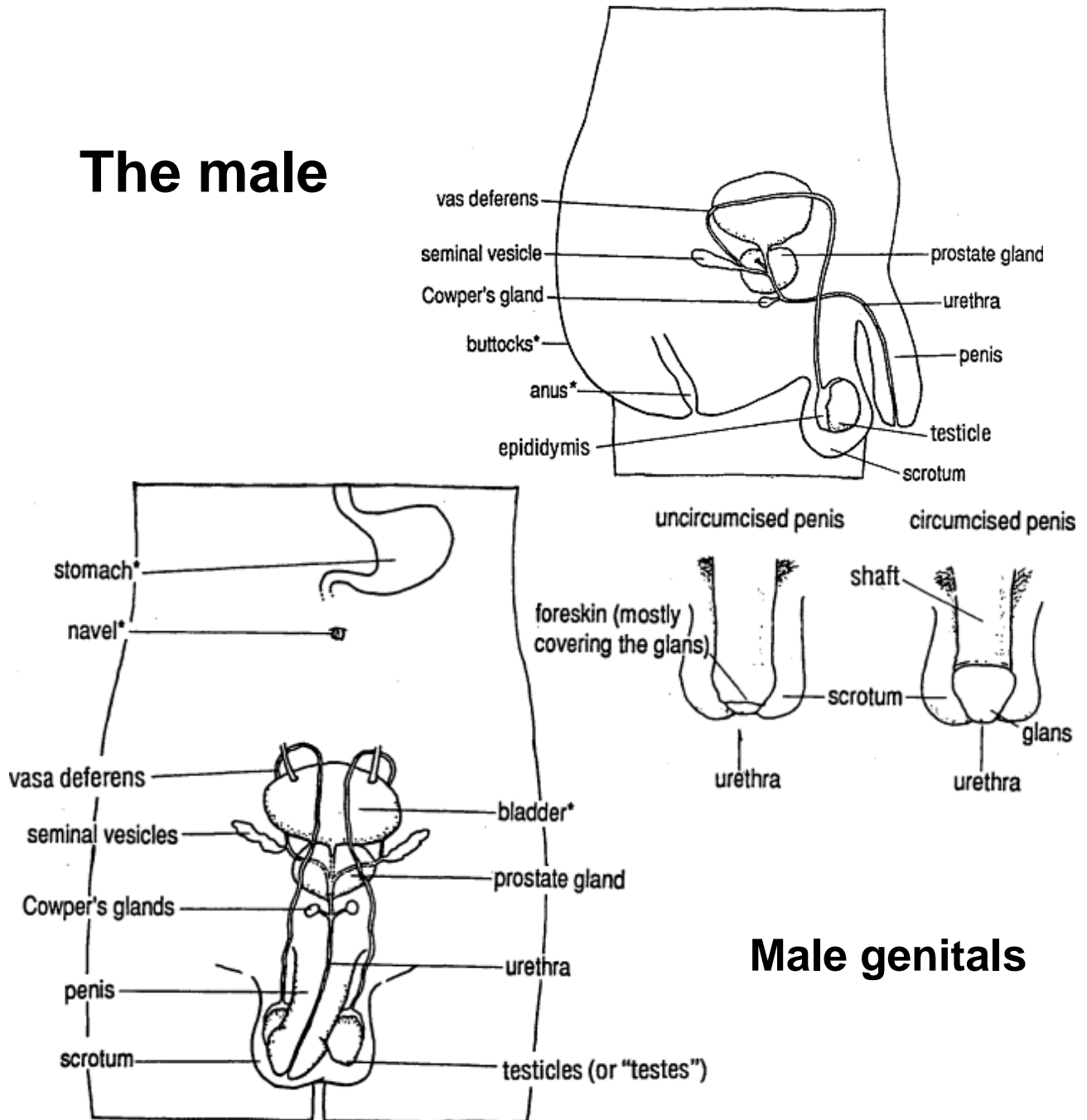


## Female genitals or “vulva”

\*not part of reproductive system

# Reproductive System Reference Sheet and Transparency 2

## The male



## Male genitals

\*not part of reproductive system

**NOTE:** The Cowper's Glands are also known as Bulbourethral Glands. Medicine is gradually moving away from using the names of scientists to describe body parts.

# Reproductive System Reference Sheet 3: GLOSSARY

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**Anus** – The opening in the buttocks from which bowel movements come when a person goes to the bathroom. It is part of the digestive system; it gets rid of body wastes.

**Buttocks** – The medical word for a person’s “bottom” or “rear end.”

**Cervix** – The opening of the uterus into the vagina.

**Circumcision** – An operation to remove the foreskin from the penis.

**Cowper’s Glands** – also called Bulbourethral Glands -- Glands on either side of the urethra that make a discharge which lines the urethra when a man gets an erection, making it less acid-like to protect the sperm.

**Clitoris** – The part of the female genitals that’s full of nerves and becomes erect. It has a glans and a shaft like the penis, but only its glans is on the out side of the body, and it’s much smaller.

**Discharge** – Liquid. Urine and semen are kinds of discharge, but the word is usually used to describe either the normal wetness of the vagina or the abnormal wetness that may come from an infection in the penis or vagina.

**Duct** – Tube, the fallopian tubes may be called oviducts, because they are the path for an ovum. The vas deferens may be called sperm ducts, because they are the path for a sperm.

**Ejaculation** – The release of semen from the penis.

**Epididymis** – The coiled tubes, behind the testicles, where sperm mature, and are stored.

**Erection** – The penis or clitoris filling with blood and becoming larger and harder.

**Fallopian Tubes** – The ducts that carry an ovum from the ovary to the uterus.

**Fimbria** – The finger-like parts on the end of each fallopian tube which find an ovum and sweep it into the tube.

**Foreskin** – The sleeve of skin around the glans of the penis. It is sometimes removed by circumcision.

**Genitals** – The parts of the reproductive system on the outside of a person’s body. The female genitals may also be called the vulva.

**Glands** – The parts of the body which produce important fluids (hormones, sweat, urine, semen, saliva, etc.) or cells (sperm, eggs, white blood cells, etc.).

**Glans** – The head of the penis or clitoris. It is full of nerve endings.

**Gonads** – The sex glands. Female gonads are called ovaries. Male gonads are called testicles. Gonads make sex cells (eggs and sperm) and sex hormones. They are part of *both* the reproductive and endocrine systems.

**Hormones** – Natural chemicals made by many glands, which flow, along with blood, through the bloodstream. They are messengers which help the body work properly.

**Hymen** – The thin skin that partly covers the opening to the vagina in some females.

**Labia** – The folds of skin in the female genitals that protect openings to the urethra and vagina.

**Labia Majora** – The larger, outer set of labia.

**Labia Minora** – The smaller, inner set of labia.

**Menstruation** – The lining of the uterus emptying out. It is sometimes called “having a period.”

**Nocturnal Emission** – Ejaculation of semen during sleep. It is sometimes called a “wet dream.”

**Ovaries** – Female gonads. They are glands on either side of the uterus where egg cells are stored and female hormones are made. The singular is *ovary*.

**Ovulation** – The release of an ovum from the ovary.

**Ovum** – The cell from a woman or girl that can start a pregnancy when it joins with sperm cell. It is sometimes called an “egg cell.” The plural is *ova*.

**Penis** – The organ of the male genitals which is sometimes circumcised. It is made of a shaft and a glans, and partly covered at birth by a foreskin. It is used for urination and ejaculation.

**Prostate Gland** – A gland under the bladder that makes some of the liquid part of semen.



**Reproduction** – Making more of something. In humans it means making babies (more humans).

**Scrotum** – The sac that holds the testes and controls their temperature.

**Semen** – The thick, whitish liquid which carries sperm cells.

**Seminal Vesicles** – Glands on each vas deferens that make some of the liquid part of semen.

**Sexual Intercourse** – The kind of sex when the penis is in the vagina. Also called “vaginal intercourse,” because oral sex and anal sex may be considered intercourse, too. Usually during vaginal intercourse the male ejaculates and this is how most pregnancies begin.

**Sexuality** – The part of us that has to do with being male or female, masculine or feminine or some of both, being able to trust, liking and respecting ourselves and others, needing and enjoying touch and closeness, and reproducing (making babies).

**Shaft** – The long part of the penis or clitoris. (The shaft of the clitoris is inside of the body.)

**Sperm** – The cell from a man or boy that can start a pregnancy when it joins with an ovum.

**Testicles** – Male gonads. They are glands in the scrotum that make sperm and male hormones. They are sometimes called testes; the singular is testis.

**Urethra** – The tube that carries urine out of the body. In males, it also carries semen, but not at the same time.

**Urine** – Liquid waste that is made in the kidneys and stored in the bladder. It is released through the urethra, when we go to the bathroom. Urine is not the same as semen.

**Uterus** – The organ where an embryo/fetus (developing baby) grows for nine months. Sometimes it is called the “womb.”

**Vagina** – The tube leading from the uterus to the outside of the female’s body. It is the middle of the three openings in her private parts.

**Vas Deferens** – The tube that carries sperm from the epididymis up into the male’s body. The plural is vasa deferens.

**Vulva** – Another word for female genitals.

# A Family Homework Exercise: The Reproductive System

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**ALL FAMILY HOMEWORK EXERCISES ARE OPTIONAL.**

**(1) First, read this aloud together:**

As children start to become teenagers, or even before the teens, they go through many changes. One change is a maturing reproductive system. Change can be exciting, but it can also be confusing. Sometimes people need a little advice or reassurance.

**(2) Each of you try filling out “*The Reproductive System Worksheet*” by yourself.**

**(3) Discuss your answers.**

Did you give similar or different advice?

Do you like each other's ideas or do you disagree?

Has any of those kinds of things ever bothered either of you?

If so, how did you handle it?

**Were there any letters neither of you knew how to answer?** If so, you may want to get a book or call your family doctor. If you have access to the Internet, you can find helpful answers to this kind of question at [www.sexetc.org](http://www.sexetc.org), a project of Answer (at Rutgers University).

## **NOTE THESE FACTS:**

- It is common, and not a problem for one testicle to be lower than the other.
- Signs of testicular cancer could be a lump or a pulling sensation.
- A white discharge between periods is very normal for young women, as long as it does not smell funny or itch.
- The breasts often develop at an uneven rate. It does not mean anything is wrong.

NOTE: Turn in a Family Homework Confirmation Slip by \_\_\_\_\_ if you want credit.

# The Reproductive System Worksheet

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Name \_\_\_\_\_ Due Date \_\_\_\_\_

**Directions:** Pretend you are “Dear Abby.” How would you answer the following letters? If you are not sure how to respond, ask someone in your family or call your family doctor. If you have access to the Internet, you can find helpful answers to this kind of question at [www.sexetc.org](http://www.sexetc.org), a project of Answer (at Rutgers University). But after you gather information, answer the letter in your own words.

1. Dear Abby,

One of my testicles is lower than the other. I worry if I have cancer or something.  
What should I do?  
— Worried

Dear Worried,

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2. Dear Abby,

I have this white liquid between my menstrual periods. I’m sort of afraid to ask my parents about it. If I went to the doctor, would my parents find out? Help!  
— Confused

Dear Confused,

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3. Dear Abby,

My older brother is always asking me if I have ever had a wet dream. What if I never do? Should I lie to him or what?

— Little Brother

Dear Little Brother,

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4. Dear Abby,

One of my breasts is starting to develop, but not the other. My mother says that is very common, but it still makes me feel funny. If my friends ask me to spend the night, I don't know what I'll do.

— Growing

Dear Growing,

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5. Dear Abby,

My friends are always talking about sex. I don't mind when we talk about it in class. It's like it's serious there, plus I learn a lot. But when my friends talk about it, it's all a joke, or sort of cheap. It embarrasses me. What can I do about it?

— Listener

Dear Listener,

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You can turn in this worksheet for credit or use it to do ***Family Homework Exercise: The Reproductive System.***